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1643

## RAW SEQUENCE LISTING

DATE: 07/28/2000

PATENT APPLICATION: US/09/529,206

TIME: 13:30:24

Input Set : A:\20264261.app

Output Set: N:\CRF3\07282000\I529206.raw

3 <110> APPLICANT: The Government of the United States of America as  
5 <120> TITLE OF INVENTION: Novel Human Cancer Antigen NY ESO-1/CAG-3 and Gene  
6 Encoding Same  
8 <130> FILE REFERENCE: 20264269PC  
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/529,206  
C--> 11 <141> CURRENT FILING DATE: 2000-06-13  
13 <150> PRIOR APPLICATION NUMBER: US60/061,428  
14 <151> PRIOR FILING DATE: 1997-10-08  
16 <160> NUMBER OF SEQ ID NOS: 106  
18 <170> SOFTWARE: PatentIn Ver. 2.0  
20 <210> SEQ ID NO: 1  
21 <211> LENGTH: 805  
22 <212> TYPE: DNA  
23 <213> ORGANISM: Homo sapiens  
25 <400> SEQUENCE: 1  
26 agcagggggc gctgtgtgta ccgagaatac gagaatacct cgtggggccct gacctttctct 60  
27 ctgagagccg ggcagaggct ccggagccat gcaggccgaa ggccggggca caggggggttc 120  
28 gacggggcat gctgatggcc caggaggccc tggcattcct gatggcccag ggggcaatgc 180  
29 tggcgggcca ggagagggcg gtgccacggg cggcagaggt ccccggggcg cagggggcagc 240  
30 aagggcctcg gggccgggag gaggcgcccc gcgggggtccg catggcgggc cggcttcagg 300  
31 gctgaatgga tgcgtcagat gcggggccag gggggccggag agccgcctgc ttgagttcta 360  
32 cctcgccatg cctttcgca caccatgga agcagagctg gcccgcagga gcctgggcca 420  
33 ggaatgcccc ccgcttcccg tgccagggtt gcttctgaag gatttccactg tgcctcgcaa 480  
34 catactgact atccgactga ctgctgcaga ccaccgcaa ctgcagctct ccacagctc 540  
35 ctgtctccag cagctttccc tgttgatgtg gatcacgcag tgctttctgc ccgtgttttt 600  
36 ggctcagcct ccctcagggc agaggcgcta agcccagcct ggccgcccct cctaggctcat 660  
37 gcctcctccc ctagggaatg gtcccagcac gaggggccag ttcattgtgg gggcctgatt 720  
38 gtttgcgct ggaggaggac ggcttacatg tttgtttctg tagaaaataa aactgagcta 780  
39 cgaaaaaaaa aaaaaaaaaa aaaaa 805  
41 <210> SEQ ID NO: 2  
42 <211> LENGTH: 540  
43 <212> TYPE: DNA  
44 <213> ORGANISM: Homo sapiens  
46 <400> SEQUENCE: 2  
47 atcgaggccg aaggccgggg cacagggggt tcgacgggag atgctgatgg cccaggaggc 60  
48 cctggcattc ctgatggccc agggggcaat gctggcggcc caggagaggc gggtgccacg 120  
49 ggcggcagag gtccccgggg cgcaggggca gcaaggccct cggggccggg aggaggcgcc 180  
50 ccgcggggtc cgcattggcg gcgggcttca gggtggaatg gatgctgcag atgcggggcc 240  
51 agggggcgcg agagccgcct gcttgagtgc tacctcgcca tgcctttcgc gacacccatg 300  
52 gaagcagagc tggcccgag gagcctggcc caggatgccc caccgcttcc cgtgccaggg 360  
53 gtgcttctga aggagttcac tgtgtccggc aacatactga ctatccgact gactgctgca 420  
54 gaccaccgcc aactgcagct ctccatcagc tccgtgtccc agcagcttcc cctgttgatg 480  
55 tggatcacgc agtgctttct gcccggtttt ttggtcagc ctccctcagg gcagaggcgc 540  
57 <210> SEQ ID NO: 3  
58 <211> LENGTH: 174  
59 <212> TYPE: DNA  
60 <213> ORGANISM: Homo sapiens

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PATENT APPLICATION: US/09/529,206DATE: 07/28/2000  
TIME: 13:30:24Input Set : A:\20264261.app  
Output Set : N:\CRF3\07282000\I529206.raw

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62 <400> SEQUENCE: 3
63 atgctgatgg cccaggaggg cctggcattc ctgatggccc agggggcaat gctggcggcc 60
64 caggagaggg ggggtccacg ggcggcagag gtccccgggg cgcaggggca gcaagggcct 120
65 cggggccggg aggaggcgcc ccgcggggtc cgcatggcgg cgcgggttca gggc 174
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 180
69 <212> TYPE: PRT
70 <213> ORGANISM: Homo sapiens
72 <400> SEQUENCE: 4
73 Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
74 1 5 10 15
76 Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
77 20 25 30
79 Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Pro Gly Pro Arg Gly Ala
80 35 40 45
82 Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
83 50 55 60
85 His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
86 65 70 75 80
88 Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
89 85 90 95
91 Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
92 100 105 110
94 Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
95 115 120 125
97 Ser Gly Asn Ile Leu Thr Ile Arg Leu Thr Ala Ala Asp His Arg Gln
98 130 135 140
100 Leu Gln Leu Ser Ile Ser Ser Cys Leu Gln Gln Leu Ser Leu Leu Met
101 145 150 155 160
103 Trp Ile Thr Gln Cys Phe Leu Pro Val Phe Leu Ala Gln Pro Pro Ser
104 165 170 175
106 Gly Gln Arg Arg
107 180
110 <210> SEQ ID NO: 5
111 <211> LENGTH: 58
112 <212> TYPE: PRT
113 <213> ORGANISM: Homo sapiens
115 <400> SEQUENCE: 5
116 Met Leu Met Ala Gln Glu Ala Leu Ala Phe Leu Met Ala Gln Gly Ala
117 1 5 10 15
119 Met Leu Ala Ala Gln Glu Arg Arg Val Pro Arg Ala Ala Glu Val Pro
120 20 25 30
122 Gly Ala Gln Gly Gln Gln Gly Pro Arg Gly Arg Glu Glu Ala Pro Arg
123 35 40 45
125 Gly Val Arg Met Ala Ala Arg Leu Gln Gly
126 50 55
129 <210> SEQ ID NO: 6
130 <211> LENGTH: 9
131 <212> TYPE: PRT
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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000  
TIME: 13:30:24

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Input Set : A:\20264261.app  
Output Set: N:\CRF3\07282000\I529206.raw

132 <213> ORGANISM: Homo sapiens  
134 <400> SEQUENCE: 6  
135 Ala Gln Pro Pro Ser Gly Gln Arg Arg  
136 1 5  
139 <210> SEQ ID NO: 7  
140 <211> LENGTH: 9  
141 <212> TYPE: PRT  
142 <213> ORGANISM: Homo sapiens  
144 <400> SEQUENCE: 7  
145 Thr Pro Met Glu Ala Glu Leu Ala Arg  
146 1 5  
149 <210> SEQ ID NO: 8  
150 <211> LENGTH: 9  
151 <212> TYPE: PRT  
152 <213> ORGANISM: Homo sapiens  
154 <400> SEQUENCE: 8  
155 Pro Met Glu Ala Glu Leu Ala Arg Arg  
156 1 5  
159 <210> SEQ ID NO: 9  
160 <211> LENGTH: 9  
161 <212> TYPE: PRT  
162 <213> ORGANISM: Homo sapiens  
164 <400> SEQUENCE: 9  
165 Gly Ala Thr Gly Gly Arg Gly Pro Arg  
166 1 5  
169 <210> SEQ ID NO: 10  
170 <211> LENGTH: 9  
171 <212> TYPE: PRT  
172 <213> ORGANISM: Homo sapiens  
174 <400> SEQUENCE: 10  
175 Gly Pro Arg Gly Ala Gly Ala Ala Arg  
176 1 5  
179 <210> SEQ ID NO: 11  
180 <211> LENGTH: 9  
181 <212> TYPE: PRT  
182 <213> ORGANISM: Homo sapiens  
184 <400> SEQUENCE: 11  
185 Leu Ala Gln Pro Pro Ser Gly Gln Arg  
186 1 5  
189 <210> SEQ ID NO: 12  
190 <211> LENGTH: 9  
191 <212> TYPE: PRT  
192 <213> ORGANISM: Homo sapiens  
194 <400> SEQUENCE: 12  
195 Val Ser Gly Asn Ile Leu Thr Ile Arg  
196 1 5  
199 <210> SEQ ID NO: 13  
200 <211> LENGTH: 9  
201 <212> TYPE: PRT

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RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/529,206DATE: 07/28/2000  
TIME: 13:30:24Input Set : A:\20264261.app  
Output Set: N:\CRF3\07282000\I529206.raw

202 <213> ORGANISM: Homo sapiens  
204 <400> SEQUENCE: 13  
205 Ile Arg Leu Thr Ala Ala Asp His Arg  
206 1 5  
209 <210> SEQ ID NO: 14  
210 <211> LENGTH: 9  
211 <212> TYPE: PRT  
212 <213> ORGANISM: Homo sapiens  
214 <400> SEQUENCE: 14  
215 Ser Gly Pro Gly Gly Gly Ala Pro Arg  
216 1 5  
219 <210> SEQ ID NO: 15  
220 <211> LENGTH: 10  
221 <212> TYPE: PRT  
222 <213> ORGANISM: Homo sapiens  
224 <400> SEQUENCE: 15  
225 Thr Val Ser Gly Asn Ile Leu Thr Ile Arg  
226 1 5 10  
229 <210> SEQ ID NO: 16  
230 <211> LENGTH: 10  
231 <212> TYPE: PRT  
232 <213> ORGANISM: Homo sapiens  
234 <400> SEQUENCE: 16  
235 Thr Ile Arg Leu Thr Ala Ala Asp His Arg  
236 1 5 10  
239 <210> SEQ ID NO: 17  
240 <211> LENGTH: 10  
241 <212> TYPE: PRT  
242 <213> ORGANISM: Homo sapiens  
244 <400> SEQUENCE: 17  
245 Ala Thr Pro Met Glu Ala Glu Leu Ala Arg  
246 1 5 10  
249 <210> SEQ ID NO: 18  
250 <211> LENGTH: 10  
251 <212> TYPE: PRT  
252 <213> ORGANISM: Homo sapiens  
254 <400> SEQUENCE: 18  
255 Phe Leu Ala Gln Pro Pro Ser Gly Gln Arg  
256 1 5 10  
259 <210> SEQ ID NO: 19  
260 <211> LENGTH: 10  
261 <212> TYPE: PRT  
262 <213> ORGANISM: Homo sapiens  
264 <400> SEQUENCE: 19  
265 Thr Pro Met Glu Ala Glu Leu Ala Arg Arg  
266 1 5 10  
269 <210> SEQ ID NO: 20  
270 <211> LENGTH: 10  
271 <212> TYPE: PRT

RAW SEQUENCE LISTING  
 PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000  
 TIME: 13:30:24

Input Set : A:\20264261.app  
 Output Set: N:\CRF3\07282000\I529206.raw

```

272 <213> ORGANISM: Homo sapiens
274 <400> SEQUENCE: 20
275 Arg Cys Gly Ala Arg Gly Pro Glu Ser Arg
276 1 5 10
279 <210> SEQ ID NO: 21
280 <211> LENGTH: 10
281 <212> TYPE: PRT
282 <213> ORGANISM: Homo sapiens
284 <400> SEQUENCE: 21
285 Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg
286 1 5 10
289 <210> SEQ ID NO: 22
290 <211> LENGTH: 10
291 <212> TYPE: PRT
292 <213> ORGANISM: Homo sapiens
294 <400> SEQUENCE: 22
295 Leu Ala Gln Pro Pro Ser Gly Gln Arg Arg
296 1 5 10
299 <210> SEQ ID NO: 23
300 <211> LENGTH: 10
301 <212> TYPE: PRT
302 <213> ORGANISM: Homo sapiens
304 <400> SEQUENCE: 23
305 Arg Gly Pro Arg Gly Ala Gly Ala Ala Arg
306 1 5 10
309 <210> SEQ ID NO: 24
310 <211> LENGTH: 10
311 <212> TYPE: PRT
312 <213> ORGANISM: Homo sapiens
314 <400> SEQUENCE: 24
315 Leu Asn Gly Cys Cys Arg Cys Gly Ala Arg
316 1 5 10
319 <210> SEQ ID NO: 25
320 <211> LENGTH: 10
321 <212> TYPE: PRT
322 <213> ORGANISM: Homo sapiens
324 <400> SEQUENCE: 25
325 Ala Ser Gly Pro Gly Gly Ala Pro Arg
326 1 5 10
329 <210> SEQ ID NO: 26
330 <211> LENGTH: 15
331 <212> TYPE: PRT
332 <213> ORGANISM: Homo sapiens
334 <400> SEQUENCE: 26
335 Ala Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg
336 1 5 10 15
339 <210> SEQ ID NO: 27
340 <211> LENGTH: 14
341 <212> TYPE: PRT

```

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/529,206

DATE: 07/28/2000

TIME: 13:30:25

Input Set : A:\20264261.app

Output Set: N:\CRF3\07282000\I529206.raw

L:10 M:270 C: Current Application Number differs, Replaced Current Application Number  
L:11 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:620 M:258 W: Mandatory Feature missing, <221> not found for SEQ ID#:54  
L:620 M:258 W: Mandatory Feature missing, <222> not found for SEQ ID#:54  
L:620 M:340 W: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:54